

Appl. No. : **09/111,604**
Filed : **July 7, 1998**

REMARKS

Claim 39 was previously pending. No claims have been canceled or amended.

Applicants note with appreciation the Examiner's indication that the application is in condition for allowance except for his request to comply with the new interference rules.

Information Disclosure Statements

The Applicants submit herewith two Information Disclosure Statements (IDS) seeking additional compliance with MPEP § 2001.06 identifying litigation related documents. One IDS provides references potentially subject to a protective order in a now-settled litigation in related patents, and the other IDS provides a copy of a Federal Circuit decision based that litigation. While the Applicants do not believe that these references will affect the patentability of the pending claims, the Applicants respectfully request the consideration of the same.

We note that information disclosure statements filed June 15, 2005 and July 22, 2005 were not considered for failure to pay the required fee. Applicants respectfully request consideration of all the foregoing IDS submissions prior to forwarding the interference to the board. Please charge any fees due for any IDS to Deposit Account No. 11-1410.

Interference Issues

A Request for Interference was filed in this case on July 7, 1998. Since that date, the rules regarding interference practice were amended. The present Office Action requests compliance with the rules propagated after the July 7, 1998 filing. Accordingly, Applicants herewith resubmit the request to have an interference declared between this application and an unexpired patent. Pursuant to 37 CFR § 41.202, Applicants submit the following information.

(1) Identification of the Patent -- 37 CFR § 41.202(a)(1)

Applicants seek an interference with U.S. Patent No. 5,645,060 (the '060 patent), which issued on July 8, 1997 to Thomas J. Yorkey. The '060 patent is entitled METHOD AND APPARATUS FOR REMOVING ARTIFACT AND NOISE FROM PULSE OXIMETRY, and at issuance was assigned to Nellcor Puritan Bennett Inc., Pleasanton, California.

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(2) Presentation of the Proposed Counts -- 37 CFR § 41.202(a)(2)

Claims 6-10 of the '060 patent are believed to interfere with Claim 39 of the present application. Proposed Count 1, presented below, corresponds to these claims.

Count 1

A method for measuring saturation of a blood constituent in a patient comprising the steps of:

irradiating said patient with electromagnetic radiation of at least three discrete, different wavelengths;

sensing an intensity of said radiation for each of said wavelengths after it passes through a portion of said patient to produce first, second, and third intensity signals;

representing each of said intensity signals as a function of concentration, the wavelength corresponding to the intensity signal, and a time-variable motion term corresponding to motion noise, said motion terms being proportional to one another for each of said intensity signals; and

solving the functions to obtain a value for said saturation,

wherein each of said functions includes a plurality of coefficients related to the wavelengths, the coefficients of said third function being determined based upon the coefficients of the first and second functions, and further comprising the steps of approximating at least a portion of said first and second intensity signals based upon the third intensity signal, and determining saturation from said approximation of said first and second intensity signals.

(3) Explanation of Why the Claims Interfere -- 37 CFR § 41.202(a)(3)

The following claim charts compare the claims of the present application with the claims of the '105 patent. The claim chart also shows why the claims interfere within the meaning of 37 CFR § 41.203(a).

COMPARISON OF PENDING CLAIM 39 WITH THE '060 PATENT CLAIM 6

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Pending Claim 39	'060 patent Claim 6	Reason for Interference
A method for measuring saturation of a blood constituent in a patient comprising the steps of:	A method for measuring saturation of a blood constituent in a patient comprising the steps of:	The preamble recitation of each of pending Claim 39 and '060 patent Claim 6 is identical. Applicants take no position as to whether this portion of the claims constitutes a limitation. To the extent the preamble recitation constitutes a limitation, each claim would anticipate the other as to the preamble recitation.
irradiating said patient with electromagnetic radiation of at least three discrete, different wavelengths;	irradiating said patient with electromagnetic radiation of at least three discrete, different wavelengths;	Pending Claim 39 and '060 patent Claim 6 would each anticipate the other as to this limitation.
sensing an intensity of said radiation for each of said wavelengths after it passes through a portion of said patient to produce first, second, and third intensity signals;	sensing the intensity of said radiation for each of said wavelengths after it passes through a portion of said patient to produce first, second and third intensity signals;	Pending Claim 39 and '060 patent Claim 6 would each anticipate the other as to this limitation.
representing each of said intensity signals as a function of concentration, the wavelength corresponding to the intensity signal, and a time-variable motion term corresponding to motion noise, said motion terms being proportional to one another for each of said intensity signals; and	representing each of said intensity signals as a function of said saturation, the wavelength corresponding to the intensity signal, and a time-variable motion term corresponding to motion noise, said motion terms being proportional to one another for each of said intensity signals; and	Pending Claim 39 and '060 patent Claim 6 would each anticipate or render obvious the other as to this limitation.
solving the functions to obtain a value for said saturation,	solving the three functions to obtain a value for said saturation,	Pending Claim 39 and '060 patent Claim 6 would each anticipate or render obvious the other as to this limitation.
wherein each of said functions includes a plurality of coefficients related to the wavelengths, the coefficients of said third function being determined based upon the	wherein each of said functions includes a plurality of coefficients, and further comprising the step of determining a set of coefficients for said third	Pending Claim 39 and '060 patent Claim 6 would each anticipate or render obvious the other as to this limitation.

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coefficients of the first and second functions, and further comprising the steps of approximating at least a portion of said first and second intensity signals based upon the third intensity signal, and determining said saturation from said approximation of said first and second intensity signals.	intensity signal from a measurement in the absence of motion noise and a determination of said saturation from said first and second intensity signals.	
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(4) Applicants Will Prevail on Priority -- 37 CFR § 41.202(a)(4)

Applicants will prevail on priority in an interference, if declared. Applicants would be the Senior Party in an interference. In particular, the '060 patent lists an earliest priority date of June 14, 1995. Applicants are entitled to constructively claim priority to, *inter alia*, U.S. Application No. 08/132,812 (now U.S. Patent No. 5,490,505) filed October 6, 1993. Accordingly, the Applicants can prove a constructive reduction to practice earlier than the earliest constructive reduction to practice of the '060 patent. Moreover, Applicants are able to prove a date of invention prior to constructive reduction to practice. For at least these reasons, Applicants will prevail on priority if an interference is declared.

(5) Written Description/Constructive Reduction to Practice -- 37 CFR § 41.202(a)(5),(6)

The following tables illustrate the written description support for Claim 39 in the pending application and priority applications¹.

Claim 39

A method for measuring saturation of a blood constituent in a patient comprising the steps of:	09/111,604 (July 7, 1998) p. 78, ll. 19-20
	08/943,511 (October 6, 1997) p. 78, ll. 19-20
	08/572,488 (December 14, 1995)

¹ The cited references are not exhaustive. In the event interference is declared, Applicants reserve the right to set forth additional citations or rely on one or more applications not cited herein.

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	<p>p. 78, ll. 19-20</p> <p>08/132,812 (October 6, 1993) p. 78, ll. 19-20</p>
<p>Irradiating said patient with electromagnetic radiation of at least three discrete, different wavelengths;</p>	<p>09/111,604 (July 7, 1998) Figure 11; p. 79, ll. 5-12; p. 81, ll. 3-5; p. 83, ll. 15-22; p. 85, ll. 1-4</p> <p>08/943,511 (October 6, 1997) Figure 11; p. 79, ll. 5-12; p. 81, ll. 3-5; p. 83, ll. 15-22; p. 85, ll. 1-4</p> <p>08/572,488 (December 14, 1995) Figure 11; p. 79, ll. 5-12; p. 81, ll. 3-5; p. 83, ll. 15-22; p. 85, ll. 1-4</p> <p>08/132,812 (October 6, 1993) Figure 11; p. 79, ll. 5-12; p. 81, ll. 3-5; p. 83, ll. 15-22; p. 85, ll. 1-4</p>
<p>Sensing an intensity of said radiation for each of said wavelengths after it passes through a portion of said patient to produce first, second and third intensity signals; and</p>	<p>09/111,604 (July 7, 1998) p. 81, ll. 3-7; p. 82, l. 19 – p. 84, l. 1</p> <p>08/943,511 (October 6, 1997) p. 81, ll. 3-7; p. 82, l. 19 – p. 84, l. 1</p> <p>08/572,488 (December 14, 1995) p. 81, ll. 3-7; p. 82, l. 19 – p. 84, l. 1</p>

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	<p>08/132,812 (October 6, 1993) p. 81, ll. 3-7; p. 82, l. 19 – p. 84, l. 1</p>
<p>Representing each of said intensity signals as a function of concentration, the wavelength corresponding to the intensity signal, and a time-variable motion term corresponding to motion noise, said motion terms begin proportional to one another; and</p>	<p>09/111,604 (July 7, 1998) equations 93, 94, 95; p. 84, ll. 9-34; p. 9, ll. 1-26; p. 33, ll. 8-23; equations 1, 2; equations 93,94,95; equation 25b</p> <p>08/943,511 (October 6, 1997) equations 93, 94, 95; p. 84, ll. 9-34; p. 9, ll. 1-26; p. 33, ll. 8-23; equations 1, 2; equations 93,94,95; equation 25b</p> <p>08/572,488 (December 14, 1995) equations 93, 94, 95; p. 84, ll. 9-34; p. 9, ll. 1-26; p. 33, ll. 8-23; equations 1, 2; equations 93,94,95; equation 25b</p> <p>08/132,812 (October 6, 1993) equations 93, 94, 95; p. 84, ll. 9-34; p. 9, ll. 1-26; p. 33, ll. 8-23; equations 1, 2; equations 93,94,95; equation 25b</p>
<p>Solving the three functions to obtain a value for said saturation;</p>	<p>09/111,604 (July 7, 1998) p. 96, ll. 10-31; equations 93, 94, 95</p> <p>08/943,511 (October 6, 1997)</p>

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	<p>p. 96, ll. 10-31; equations 93, 94, 95</p> <p>08/572,488 (December 14, 1995) p. 96, ll. 10-31; equations 93, 94, 95</p> <p>08/132,812 (October 6, 1993) p. 96, ll. 10-31; equations 93, 94, 95</p>
<p>Wherein each of said functions includes a plurality of coefficients related to the wavelengths, the coefficients of the first and second functions, and further comprising the steps of approximating at least a portion of said first and second intensity signals based upon the third intensity signal, and determining saturation from said approximation of said first and second intensity signals.</p>	<p>09/111,604 (July 7, 1998) p. 36, ll. 11-26; p. 75, l. 20 – p. 76, l. 20; p. 77, ll. 23-30; equation 92; p. 84, l. 8 – p. 86, l. 24; equations 93-96; p. 90, l. 9 – p. 93, l. 22; p. 96, ll. 20-31</p> <p>08/943,511 (October 6, 1997) p. 36, ll. 11-26; p. 75, l. 20 – p. 76, l. 20; p. 77, ll. 23-30; equation 92; p. 84, l. 8 – p. 86, l. 24; equations 93-96; p. 90, l. 9 – p. 93, l. 22; p. 96, ll. 20-31</p> <p>08/572,488 (December 14, 1995) p. 36, ll. 11-26; p. 75, l. 20 – p. 76, l. 20; p. 77, ll. 23-30; equation 92; p. 84, l. 8 – 86, l. 24; equations 93-96; p. 90, l. 9 – 93, l. 22; p. 96, ll. 20-31</p> <p>08/132,812 (October 6, 1993) p. 36, ll. 11-26; p. 75, l. 20 – p. 76, l. 20; p. 77, ll. 23-30;</p>

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	equation 92; p. 84, l. 8 – p. 86, l. 24; equations 93-96; p. 90, l. 9 – p. 93, l. 22; p. 96, ll. 20-31
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Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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Dated: March 6, 2006

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